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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/802,792	03/08/2001	Paul A. Hosier	D/A1102	8347

7590 05/23/2002

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EXAMINER

SOHN, SEUNG C

ART UNIT	PAPER NUMBER
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2878

DATE MAILED: 05/23/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/802,792

Applicant(s)

HOSIER ET AL.

Examiner

Seung C. Sohn

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3/8/2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: **"12" in Fig. 1**. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

2. **Claims 4 and 5** are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 4 and 5 do not narrow the independent claim 1 since claim 1 already recites a light-transmissive planar layer and a light-transmissive filtering layer.

3. **Claim 37** is objected to because of the following informalities:

On line 1, "claim 30" after "the method of" should be -- claim 31 --.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. ***Claim 1-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hosier (Patent No. US 6,157,019) in view of Lin et al. (Patent No. US 6,242,730).***

Referring to claims 1-5 and 11-13, Hosier shows in Fig. 3 the following elements of Applicant's claim:

a) a main surface, having at least one photosite (12) thereon, the main surface defining an edge (Col. 4, lines 36-38);

b) a groove portion (18) defined at the edge (Col. 4, lines 23-26).

Hosier shows as above, but does not disclose a light-transmissive planar layer and a light-transmissive filtering layer. Lin et al. shows in Figs. 3 or 6 a light-transmissive planar layer (304 or 604) disposed over the main surface, the planar layer forming a planar surface substantially parallel with the main surface, the planar layer extending over the groove portion (Col. 3, lines 45-49), and a light-transmissive filtering layer (306 or 606) disposed over the planar layer (Col. 4, line 64 – Col. 5, line 3). It would have been obvious to a person having ordinary skill in the art to provide the light-transmissive planar layer and the light-transmissive filtering layer of Lin et al. to the device of Hosier for the purpose of preventing the underlying device from being

mechanically damaged and penetrated by moisture and alkaloid ions (Col. 3, lines 36-41).

Referring to claims 6 and 14, the modified device of Hosier shows that the planar layer being substantially transmissive of visible light (Col. 4, lines 55-58), and the filtering layer being transmissive of a predetermined range of wavelengths of light (Col. 6, lines 42-46).

Referring to claims 7-9 and 15-16, Hosier shows the filtering layer comprising a first portion transmissive of a first predetermined range of wavelengths of light and a second portion transmissive of a second predetermined range of wavelengths of light (Col. 2, lines 7-10).

Referring to claims 10, 30 and 37, Hosier shows a ridge defined on the main surface between the photosite and the groove (Col. 4, lines 28-33).

Referring to claims 17-19 and 26-29, Hosier shows in Fig. 3 a second photosensitive chip, the second chip having a plurality of photosites thereon, the first chip and the second chip being arranged to yield a single functional array of photosites, and the second chip having a planar layer and a filtering layer arranged substantially similar to the first chip (Col. 4, lines 38-41).

Referring to claims 20-25, Hosier shows in Fig. 3 the following elements of Applicant's claim:

a) a first chip area (12) defined in a main surface of the water, the first chip area including structure related to a first photosite (Col. 4, lines 36-38); and

b) a groove (18) defined in the wafer (30), the groove defining at least one edge of the first chip area (Col. 4, lines 23-26).

Hosier shows as above, but does not disclose a light-transmissive planar layer and a light-transmissive filtering layer. Lin et al. shows in Figs. 3 or 6 a light-transmissive planar layer (304 or 604) disposed over the main surface, the planar layer forming a planar surface substantially parallel with the main surface, the planar layer extending over the groove portion (Col. 3, lines 45-49), and a light-transmissive filtering layer (306 or 606) disposed over the planar layer (Col. 4, line 64 – Col. 5, line 3). It would have been obvious to a person having ordinary skill in the art to provide the light-transmissive planar layer and the light-transmissive filtering layer of Lin et al. to the device of Hosier for the purpose of preventing the underlying device from being mechanically damaged and penetrated by moisture and alkaloid ions (Col. 3, lines 36-41).

Referring to claims 31-32, Hosier shows in Figs. 3 and 4 the following elements of Applicant's claim:

providing an integrated circuit wafer (30), the wafer comprising a first chip (10) area defined in a main surface of the wafer, the first chip area including structure related to a first photosite, and a groove (18) defined in the wafer, the groove defining at least one edge of the first chip area (Col. 4, lines 35-38).

Hosier shows as above, but does not disclose a light-transmissive planar layer. Lin et al. shows in Fig. 3 a light-transmissive planar layer (304) disposed over the main surface, the planar layer forming a planar surface substantially parallel with the main

surface, the planar layer extending over the groove portion (Col. 3, lines 45-49). It would have been obvious to a person having ordinary skill in the art to provide the light-transmissive planar layer of Lin et al. to the device of Hosier for the purpose of preventing the underlying device from being mechanically damaged and penetrated by moisture and alkaloid ions (Col. 3, lines 36-41).

Referring to claim 33, Hosier shows the step of dicing the wafer along the groove (Col. 4, lines 19-21).

Referring to claims 34-36, the modified device of Hosier shows the step of providing a filtering layer disposed over the planar layer, the filtering layer extending over the first photosite and over the groove (Col. 3, lines 48-49).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sakamoto et al. (Patent No. US 5,648,653) discloses an optical filter having alternately laminated thin layers provided on a light receiving surface of an image sensor.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seung C. Sohn whose telephone number is (703) 308-4093. The examiner can normally be reached on Monday through Friday from 8:30 am to 5 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (703) 308-4881. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

SCS

SCS
May 15, 2002



Kevin Pyo
Primary Examiner